

CLAIMS

We claim:

- 5 1. A method for securing a structure comprising the steps of:
 positioning a brace against said structure;
 detecting a load on said brace at a load sensing member; and
 disabling a controller if it is determined from said load that a portion of said
structure will collapse if said brace is removed.
- 10 2. The method of claim 1 further comprising the steps of:
 disabling a second controller if it is determined that an operator is present in a zone
of danger.
- 15 3. The method of claim 1 wherein said structure is a ceiling of an excavated
cavity.
4. The method of claim 1 wherein said load sensing member is a load sensing
pin.
- 20 5. The method of claim 1 wherein said load sensing member is a pressure
sensor coupled to a hydraulic system.
6. The method of claim 1 wherein all of said load is transmitted through said
25 load sensing member.

7. The method of claim 1 further comprising the steps of:
disabling a second controller if it is determined that an operator is present in a zone
of danger, wherein said structure is a ceiling of an excavated cavity, wherein said load
5 sensing member is a load sensing pin, and wherein all of said load is transmitted through
said load sensing member.

8. A structural bracing system comprising:
a brace configured to be positioned against a structure;
10 a load sensing member configured to detect a load on said brace; and
a control disabling unit configured to disable a controller if it is determined from
said load that a portion of said structure will collapse if said brace is removed.

9. The structural bracing system of claim 8 further comprising:
15 a second control disabling unit configured to disable a second controller if it is
determined that an operator is present in a zone of danger.

10. The structural bracing system of claim 8 wherein said structure is a ceiling
of an excavated cavity.

20 11. The structural bracing system of claim 8 wherein said load sensing member
is a load sensing pin.

12. The structural bracing system of claim 8 wherein said load sensing member
25 is a pressure sensor coupled to a hydraulic system.

13. The structural bracing system of claim 8 wherein all of said load is
5 transmitted through said load sensing member.

14. The structural bracing system of claim 8 further comprising:
a second control disabling unit configured to disable a second controller if it is
determined that an operator is present in a zone of danger, wherein said structure is a
10 ceiling of an excavated cavity, wherein said load sensing member is a load sensing pin, and
wherein all of said load is transmitted through said load sensing member.

15. A computer program product comprising:
a computer usable medium having computer readable program code embodied
15 therein configured to control a structure securing system, said computer program product
comprising:
computer readable code configured to cause a computer to position a brace against
a structure;
computer readable code configured to cause a computer to detect a load on said
20 brace at a load sensing member; and
computer readable code configured to cause a computer to disable a controller if it
is determined from said load that a portion of said structure will collapse if said brace is
removed.

25 16. The computer program product of claim 15 further comprising:

computer readable code configured to cause a computer to disable a second controller if it is determined that an operator is present in a zone of danger.

17. The computer program product of claim 15 wherein said structure is a
5 ceiling of an excavated cavity.

18. The computer program product of claim 15 wherein said load sensing member is a load sensing pin.

10 19. The computer program product of claim 15 wherein said load sensing member is a pressure sensor coupled to a hydraulic system.

20. The computer program product of claim 15 wherein all of said load is transmitted through said load sensing member.
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21. The computer program product of claim 15 further comprising:
computer readable code configured to cause a computer to disable a second controller if it is determined that an operator is present in a zone of danger, wherein said structure is a ceiling of an excavated cavity, wherein said load sensing member is a load
20 sensing pin, and wherein all of said load is transmitted through said load sensing member.